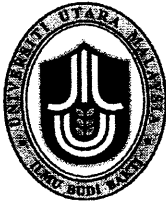


E-MAIL FILTERING USING BAYESIAN NETWORK

A thesis submitted to the Graduate School in partial
fulfillment of the requirement for the degree
Master of Science Intelligence System (IS)
Universiti Utara Malaysia

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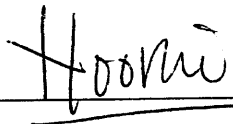
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ABSTRACT

E-Mail is important today. It is applied in many application; Education, Business and personal communication. Once there are too many E-Mail arrived in the mailbox and mostly are unwanted E-Mail, called Spam. Spam is a costly problem. At Prince of Songkhla University (PSU), there are around 5,000 e-mail users and around 40,000 messages received a day. There are 10 % of them are virus and spam messages. Otherwise, the mail server has to pay memory and CPU load to process these virus and spam messages. These may cause the server response slowly and sometime once the system resources are insufficient, the mail server may crash and unavailable. Many filtering techniques are proposed. Bayesian Network is one of the popular Spam Filtering methods. This project is study Bayesian Network using SpamBayes, Open Source Software. Spam E-Mail are always written in English but at PSU there are Thai Language Spam found increasingly. Thai Language is different from English Language because English word is separated by space but Thai Language is not. The project examines the SpamBayes accuracy on Spam classification of mix Thai and English E-Mail messages. Thai and English E-Mail are trained together and test messages are also Thai and English mixed. The result shows that SpamBayes can classify Spam both in Thai or English.

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CHAPTER 1

INTRODUCTION

This chapter presents the overview of the E-Mail Filtering using Bayesian Network. The project objective, significant and scope of study are also discussed.

1.1 Overview

E-Mail is important today. From the day when computers were first linked together through some form of a network, computer users have been sending messages to each other over the wires. Now with the worldwide presence of the Internet, computer networks handle trillions of messages every day. Electronic mail, or e-mail, is one of the most commonly used services on computer networks and the Internet. The major attraction of e-mail is its almost immediate delivery. Despite the distance between the sender and the receiver, an e-mail message can find its way anywhere in the world within minutes. E-mail has a way of drawing the global community closer together.

E-mail More Important Than the Phone In Business. A survey of businesspeople at 387 organizations found that 80 percent believed e-mail was more important than the telephone in communicating with coworkers, customers, or partners. Just as

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